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BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

In the Matter of)
)
Establishment of an Advisory Committee)
to Negotiate Regulations for the)
Provision of Mobile Satellite Services)
in the 1610-1626.5 MHz and)
2483.5-2500 MHz Frequency Bands)

CC Docket No. 92-166

To: The Commission

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JOINT PROPOSAL

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

The undersigned applicants, by their attorneys, hereby submit for the Advisory Committee's consideration a set of proposed technical rules (Attachment A) and service rules (Attachment B) that are designed to expedite the implementation of satellite systems providing mobile satellite services ("MSS") and radiodetermination satellite services ("RDSS") in the 1610-1626.5 MHz and 2483.5-2500 MHz frequency bands, and thus facilitate the inauguration of valuable MSS and RDSS services in the United States. The rules proposed in the attachments hereto represent several months of efforts by TRW Inc., Ellipsat Corporation, Constellation Communications, Inc., and Loral Qualcomm Satellite Systems, Inc. Each of the parties believes that the proposed rules they have developed provide a reasonable and pragmatic solution to the issues facing the implementation of the MSS/RDSS service in the subject frequency bands.

The undersigned parties intend to introduce the rules proposed in Attachments A and B at the inaugural meeting of the Advisory Committee in this proceeding on January 6, 1993. Loral Qualcomm Satellite Systems, Inc. participated in the development

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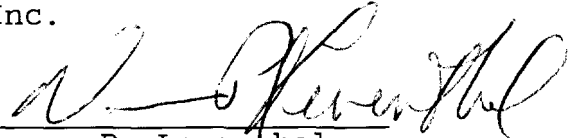
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of the technical rules in Attachment A and supports their consideration and implementation. The undersigned applicants trust that careful and attentive consideration of the proposals contained therein will be given by the Committee, and by the Commission itself.

Respectfully submitted,

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ATTACHMENT A

Proposed Technical Rules

**PROPOSED TECHNICAL RULE PROVISIONS FOR THE
MOBILE AND RADIODETERMINATION SATELLITE SERVICE**

1. **Replace subsection (25) to Section 25.114(c) with the following:**

(25) Applications for authorizations in the Mobile and Radiodetermination Satellite Service in the 1610-1626.5 MHz and 2483.5-2500 MHz bands shall also provide all information specified in § 25.141.

2. **Modify Section 25.141 of the Commission's Rules to read as follows:**

§ 25.141. Licensing Provisions For The Mobile and Radiodetermination Satellite Service in the 1610-1626.5 MHz and 2483.5-2500 MHz Bands.

(a) Space station application requirements. Each application for a space station license in the Mobile and Radiodetermination Satellite Service in the 1610-1626.5 MHz and/or 2483.5-2500 MHz bands shall describe in detail the proposed Mobile and Radiodetermination Satellite Service satellite system, setting forth all pertinent technical and operational aspects of the system, including its capability for providing radiodetermination service on a geographic basis, and the technical, legal and financial qualifications of the applicant. In particular, each applicant shall include the information specified in Section 25.114, except that applicants for non-geostationary Mobile and Radiodetermination Satellite Service systems, in lieu of providing the information concerning orbital locations requested in Section 25.114(c)(6), shall specify the number of space stations that will comprise its system and their orbital configuration, including the number of planes and their inclinations, altitude(s), argument(s) of perigee, service arc(s), and right ascension of ascending node(s). Applicants must also file information demonstrating compliance with all requirements of this section, specifically including information demonstrating that they will not cause harmful interference to any authorized or licensed Mobile and Radiodetermination Satellite Service system.

(b) User transceivers. Individual user transceivers will not be licensed. Service vendors may file blanket applications for transceiver units using FCC Form 493 and specifying the number of units to be covered by the blanket license. FCC Form 430 should be submitted if not already on file in conjunction with other facilities licensed under this subpart. Each application must show that its user transceiver units will comply with the technical parameters of the satellite system(s) with which the units will communicate.

(c) Permissible communications. Stations in these bands shall provide both mobile and radiodetermination satellite communications services.

(d) Frequency assignment policies. Each satellite system authorized under this section will be assigned the entire allocated frequency bands on a non-exclusive basis. Coordination procedures and power limits as set forth in subsections (e) and (f) below shall be employed to avoid harmful interference with other satellite systems in these bands.

(e) Mobile and Radiodetermination satellite system coordination procedures.

(1) Licensees shall coordinate with other licensees to avoid harmful interference to Mobile and Radiodetermination satellite systems in these bands. During the coordination processes, licensees shall exchange relevant information and interference calculations, subject to appropriate confidentiality arrangements, and shall meet as necessary to negotiate in good faith to resolve potential interference problems. Coordination hereunder shall be a continuous process, taking into account changes in system parameters, traffic configuration, and other relevant factors.

(2) Technical coordination in these bands is based on the equitable allocation of interference noise among systems sharing these bands. A non-spread spectrum system shall not cause a higher level of interference to a spread spectrum system, nor place any more restrictive constraints on the operations of a spread spectrum system, than that imposed by any other single spread spectrum system operating in the bands.

(3) Coordination agreements would typically be based on mutually agreed values of the following parameters of each system operating in the band:

(i) The maximum value of the downlink PFD at any point in the service area per system, averaged over an appropriate period of time. Polarization effects shall be considered when calculating the maximum PFD.

(ii) The maximum aggregate EIRP density simultaneously radiated by all user terminals for a single system within the Continental United States.

(iii) Polarization;

(iv) Frequency plans;

(v) Code structures and associated cross correlation properties;

(vi) Antenna beam patterns; and

(vii) Signal burst structures.

(f) License conditions. All authorization in these bands shall be subject to the following conditions:

(1) The e.i.r.p. density of any earth station transmitter shall not exceed -15 dBW/4 kHz in any portion of the 1610-1626.5 MHz band where satellite-borne electronic aids to air navigation are operated under the provision of RR No. 732 of the international Radio Regulations and operation within this limit shall be deemed to provide the necessary level of interference protection to such systems. Notwithstanding the preceding sentence, the e.i.r.p. density of an earth station transmitter may exceed -15 dBW/4 kHz in exceptional cases, even in a portion of the 1610-1626.5 MHz band where satellite borne electronic aids to air navigation are operated, provided that whatever special measures may be necessary to protect such systems from harmful interference are taken.

(2) Each licensee of transmitting earth stations in the 1610.6-1613.8 MHz band shall coordinate its operations with the designated representative for the radio astronomy service in order to provide adequate protection of radio astronomy observations in this band.

[IN RECOGNITION OF THE FACT THAT UNRESOLVED ISSUES REMAIN REGARDING THE DOMESTIC ALLOCATION FOR BI-DIRECTIONAL OPERATIONS IN THE 1613.8-1626.5 MHz BAND, AND IN THE EVENT THAT THE COMMISSION DECIDES TO ALLOW FOR THE POSSIBILITY OF SUCH SECONDARY, BI-DIRECTIONAL OPERATIONS IN THAT BAND, SUBSECTION (g), AS FOLLOWS, WOULD BE ADDED]

(g) Downlink operations in the 1613.8-1626.5 MHz band. Use of the 1613.8-1626.5 MHz band for space-to-Earth transmission is authorized on a secondary basis as defined in § 2.104(d)(4) and § 2.105(c)(3) of the Commission's Rules. Authorizations to conduct such space-to-Earth transmissions shall be subject to the following conditions:

(1) Any secondary usage of the 1613.8-1626.5 MHz band shall not reduce the capacity of any primary user of the band.

(2) The transmitting space station EIRP density shall be below **(TBD)** for transmissions not impinging on the

earth in order to avoid harmful interference into primary uplink services;

(3) The EIRP of the main lobe downlink transmission shall be limited so as to include the effects due to specular reflections from the earth to comply with paragraph (1) of this subsection (g);

(4) Space-to-Earth transmissions in any space station antenna beam shall cease whenever there is a direct line-of-sight coupling with a receiving beam on another satellite in the band;

(5) Receiving earth stations in this band cannot claim protection from harmful interference from, nor otherwise place operating constraints on, transmitting earth stations operating in the band; and

(6) Operation of such downlinks shall cease immediately upon notification of harmful interference being caused to licensed uplink operations in the band.

ATTACHMENT B

Proposed Service Rules

**PROPOSED SERVICE RULE PROVISIONS FOR THE
MOBILE AND RADIODETERMINATION SATELLITE SERVICE**

1. **Modify Section 25.141 of the Commission's Rules (as proposed for modification on Attachment A) by adding new subsections (h), (i), (j) and (k), as follows:**

(h) Noncommon carrier/common carrier operation; eligibility for license.

(1) Applicants for space station licenses in the Mobile and Radiodetermination Satellite Service may request that their proposed systems be licensed either on a noncommon carrier or on a common carrier basis, and will be licensed accordingly.

(2) Common carrier Mobile and Radiodetermination Satellite Service space station licenses shall be classified as nondominant carriers, and shall be subject to streamlined tariff filing and facilities authorization procedures under Parts 61 and 63 of the Commission's rules.

(3) The Commission will preempt all state or local regulations over services, facilities and operations licensed under this subpart.

(4) The facilities authorized in these bands may be used for domestic and/or international satellite communications services.

(i) License term; replacement space stations.

(1) Space station license term. The license terms for Mobile and Radiodetermination Satellite Service space stations that are operated as a single system will be ten years and will begin simultaneously at 3 a.m. EST on the date that the licensee certifies to the Commission that one half (50 percent) of the space stations the licensee has been authorized to construct, launch, and operate as part of its system have been successfully placed into orbit and are capable of operating. As additional space stations originally authorized as part of the system are brought into service, the expiration dates of the licenses of such stations shall be the date ten years after the date on which the licensee made the certification contemplated by this subsection. Nothing in this subsection shall be interpreted to preclude system licensees from commencing commercial services from operational space stations prior to the commencement of the license term.

(2) Replacement space stations. In the case of Mobile and Radiodetermination Satellite Service systems consisting of multiple space stations that are operated as a single system, the licensee shall be authorized, upon

application to the Commission, to construct, launch, and operate space stations to replace failed or retired space stations authorized as part of the original system. If an application for authority to launch and operate such a replacement space station is granted before the last date for submission of a renewal application, as set forth in subsection (j) of this section, the license of said replacement space station shall expire at the end of the license term of the space station it is to replace. If an application for authority to launch and operate a replacement space station is granted after the last date for submission of a renewal application, as set forth in subsection (j) of this section, the license shall expire at the end of the renewal term if the renewal application is granted, or at such time as the Commission may otherwise determine if the renewal application is dismissed or denied. In either case, such applications for replacement space stations shall not be considered newly-filed for cut-off purposes, and shall not be subject to mutually exclusive applications apart from any such mutually exclusive application as may be filed against the system renewal application (see subsection (j) below).

(j) Space station license renewal.

(1) Space station renewal. A licensee of a Mobile and Radiodetermination Satellite Service system consisting of multiple space stations that are operated as a single system shall file a blanket application for renewal of the licenses of the space stations that comprise such system. Renewal applications shall be filed by the licensee during the ninth year of the license term.

(2) Renewal expectancy. A Mobile and Radiodetermination Satellite Service renewal applicant shall receive a license renewal if its past record for the relevant license period demonstrates that the renewal applicant:

(i) Has substantially used its spectrum for its intended purpose;

(ii) Has substantially complied with applicable Commission rules, policies, and the Communications Act; and

(iii) Has not otherwise engaged in substantial relevant misconduct.

(3) Public notice. All applications for renewal of licenses of space stations in the Mobile and Radiodetermination Satellite Service shall be placed on public notice.

(k) Milestones.

(1) Construction of the first space station in a Mobile and Radiodetermination Satellite Service system must be commenced within eighteen (18) months after the grant of a construction permit, and must be completed within four (4) years after the grant of a construction permit.

(2) Permittees of multiple Mobile and Radiodetermination Satellite Service space stations must commence construction of all remaining space stations required to make the certification called for in subsection (i) of this section within three (3) years after the grant of a construction permit.

(3) All space stations authorized for a Mobile and Radiodetermination Satellite Service system, except stations authorized as on-ground spares, must be launched and operational within six (6) years after the grant of a construction permit.

(4) All permittees of space stations in the Mobile and Radiodetermination Satellite Service must notify the Commission as each milestone in paragraphs (1) - (3) of this subsection (k) is met.

CERTIFICATE OF SERVICE

I, Kimberly A. Moats, hereby certify that a copy of the foregoing "Joint Proposal" was served by first-class mail, postage prepaid, this 5th day of January 1993, on the following persons:

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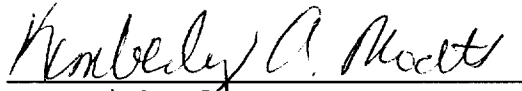
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